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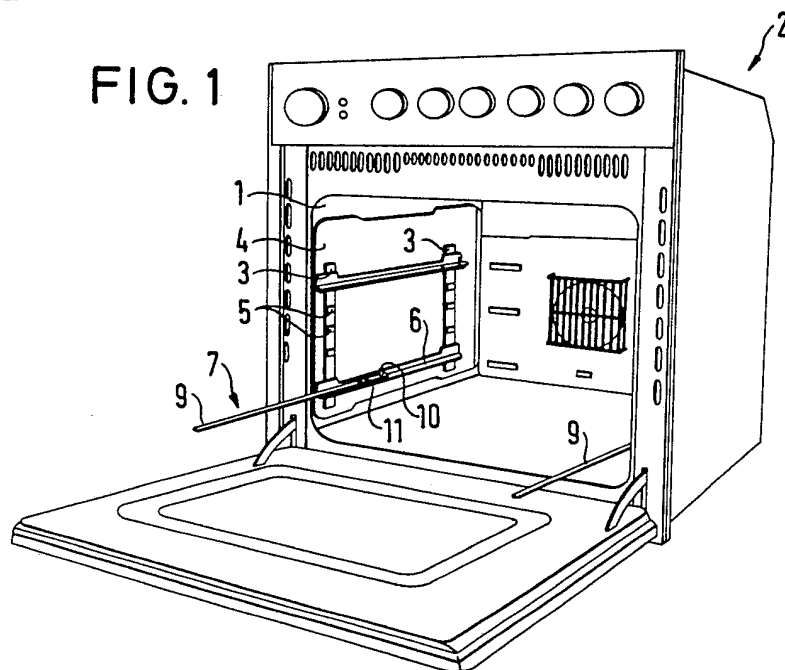
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(54) Oven with movable food carriers

(57) An oven comprises telescopically extensible rails (7) fastened to carrier members (3) arranged vertically at the side walls (1) of a baking oven muffle (2). Each rail (7) comprises a movable rail member (9) and a locally fixed rail member (6), which have co-operable extension-limiting devices. The movable rail member (9) also has an extension limitation (10) co-operating with a food tray or grill slidably carried by the movable rail member.

FIG. 1



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FIG. 1

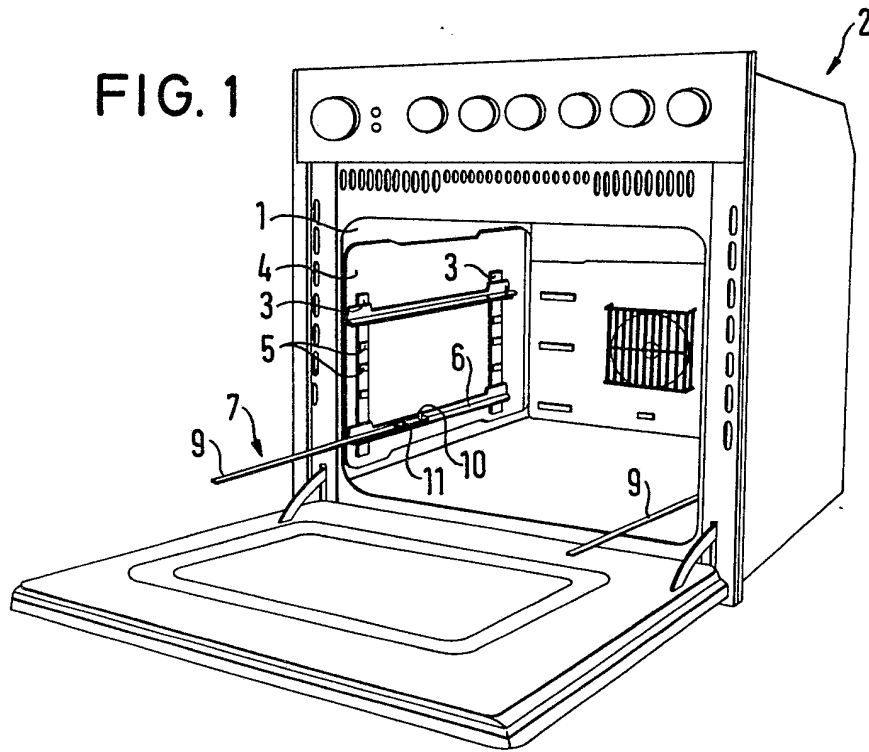


FIG. 2

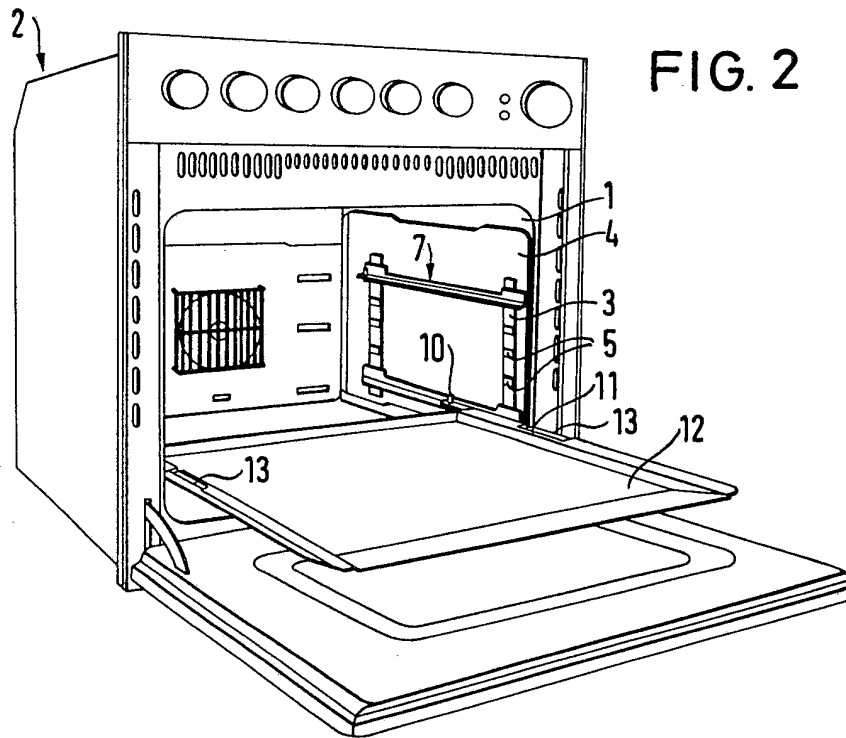


FIG. 3

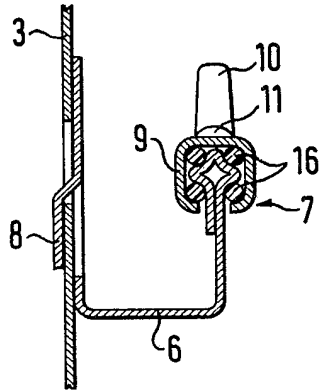


FIG. 4

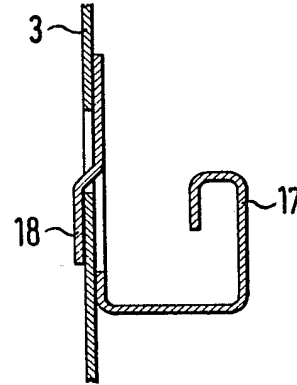


FIG. 5

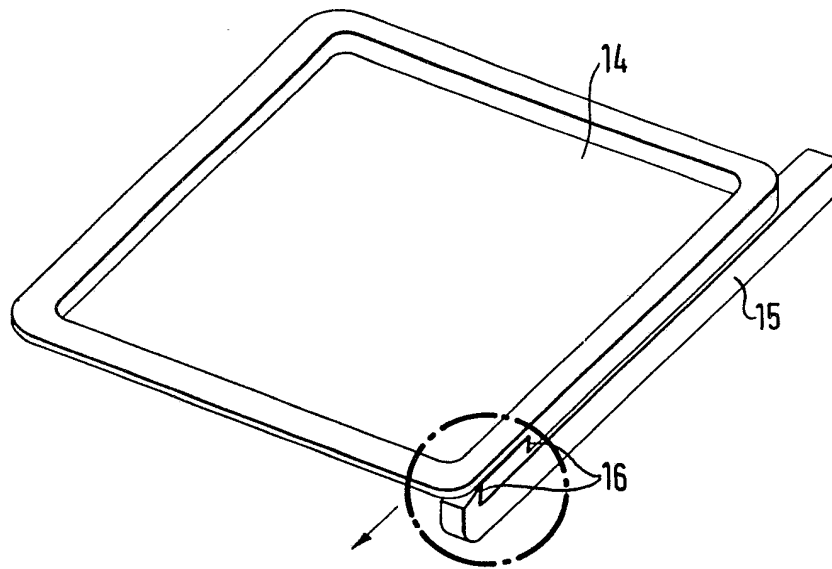


FIG. 6

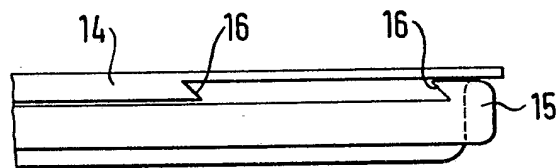


FIG. 7

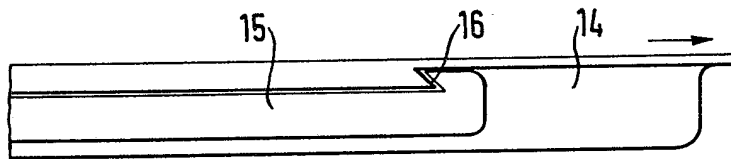
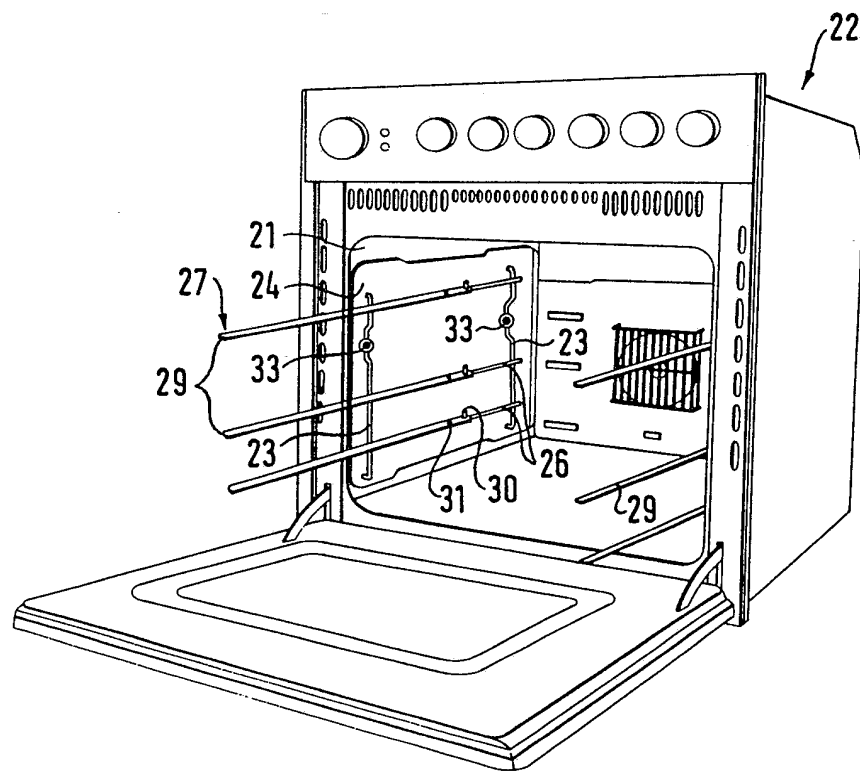


FIG. 8



SPECIFICATION

Cooker

5 The present invention relates to a cooker and has particular reference to the support of food carriers, for example baking and roasting trays and grills.

10 In the case of household cookers operated by gas or by electricity energy and/or microwave energy, the food carriers, such as metal roasting and baking trays and grills, are usually constructed with flat rims and guided by way of these rims in slot-like guide channels of the side walls of the baking oven muffle of the cooker. In place of such guide channels, bracket-shaped support rails can be mounted at these side walls or convexities can be provided in the side walls, on which the carriers can be placed. The carriers are withdrawable towards the front out of the muffle. In order to enable access over the entire area to these carriers, it is required in the known ovens to remove the carriers and put them down elsewhere.

15 In the case of carriages which, by contrast to tilting doors, are not swung open but are pulled out parallelly to the front, it is known to pull out the food carriers together with the carriage carrying the door. Since all carriers are suspended at the inside of the door and drawn out at the same time, only the uppermost carrier is freely accessible. Access to the carriers thereunder is possible only by removal of the upper carrier.

20 It is also known to equip food carriers themselves with a telescopically extensible member. By this means it is possible to pull individual, appropriately constructed carriers out of the oven space and yet store them in this setting at the walls of the oven muffle.

25 It would thus be desirable to provide a cooker in which a food carrier can be drawn out of the baking oven space and held through simple measures.

30 According to the present invention there is provided a cooker comprising a baking oven muffle, a plurality of upright mounting members arranged at the side walls of the muffle and a plurality of extensible rails mounted on the mounting members and each comprising a fixed rail member and a movable rail member movably mounted thereon and adapted for sliding support of a tray or grill, the fixed and movable rail members of each rail being provided with co-operable extension-limiting means to limit relative movement of the rail members in the sense of extension of the rail and the movable rail member with further extension-limiting means to limit sliding movement of such tray or grill relative thereto.

35 In a preferred embodiment, telescopically extensible members are fastened at mounting members arranged vertically at the side walls of the muffle and the movable rail members

and the locally fixed rail members have extension-limiting devices acting one against the other while the movable rail members, in the support region for food carriers, have extension limitations co-operating therewith.

40 Preferably, the mounting members are detachably fastened to the side walls of the muffle. This provides the possibility, among other things, that catalytic protective wall members can be arranged selectably between the mounting members and the side walls of the muffle, preferably detachably so that these catalytic side wall members are also withdrawable.

45 For preference, the rails are suspended, by means of suspension devices, at different heights on the mounting members. Preferably, the mounting members have a flat profile and a plurality of recesses which are spaced apart in height and at which the rails can be suspended selectably by means of hook projections of the suspension devices. The number of rails can thus be reduced to a minimum number matched to the highest number of food carriers needed at the same time without having to forego the capability of providing a plurality of different food carrier shelf levels in the muffle.

50 For preference, those ends of the rails which face a door of the muffle have cam or ramp surfaces by way of which rails are pushable into the muffle interior on closing of the door.

55 Such a cooker may embody a simple construction and make no special demands on the structuring of the side walls of the muffle. For the telescopically extensible rails, which according to the conditions in the muffle interior during cooking should preferably be of appropriate corrosion-resistant material, it is expedient to arrange the rail members to be movable relative to each other on roller bearings, which preferably include glass or bronze balls as temperature-resistant roller bearing elements in cages. In place of the telescopically extensible rails, simple horizontal rails can be suspended when this is sufficient in individual cases. A braking effect on the withdrawal of the movable rail members can be provided by ramp flanks in the rails.

60 Embodiments of the present invention will now be more particularly described by way of example with reference to the accompanying drawings, in which:

65 Fig. 1 is a perspective view of a first cooker embodying the invention, with tilted-up baking oven muffle door and inserted telescopically extensible rails;

Fig. 2 is another perspective view of the cooker of Fig. 1, showing a metal baking plate placed on one of the rails;

Fig. 3 is a cross-section, to an enlarged scale, of one of the rails;

Fig. 4 is a cross-section, to an enlarged scale, of a non-extensible rail mountable in the

muffle in place of an extensible rail;

Fig. 5 is a perspective view of part of an extensible rail with food tray;

Fig. 6 is a side view of the rail and tray of

Fig. 5, showing abutments thereof (spaced apart);

Fig. 7 is a side view of the rail and tray of Fig. 5, showing abutments (in contact); and

Fig. 8 is a perspective view of a second

cooker embodying the invention.

Referring now to the drawings, there is shown in Figs. 1 and 2 a cooker in which two carrier members 3 of flat profile are arranged at each of two side walls 1 of a baking oven muffle 2 of the cooker. Withdrawable, catalytic protective walls 4 are disposed between the side walls 1 and the carrier member 3. The carrier members 3 each have a plurality of recesses 5, in which locally fixed rail members 6 of telescopically extensible rails 7 are respectively suspended selectably at different heights by way of hook projections 8 (Figs. 3 and 4). Rearward abutments 10 and retarding abutments 11 for the limitation of the movement of cooking stock carriers, for example a metal baking tray 12, a roasting tray, grill or the like, which is laid on the movable rail members 9, are arranged on the rail members 9. The tray 12 in its support track has cut-outs 13 which co-operate with the abutments 11.

Fig. 3 shows a section of a carrier member 3 in the region of a recess 5, at which the fixed rail member 6 of a rail 7 is hooked by way of a stay projection 8 thereof. The movable rail member 9 is guided on the fixed rail member 7 by way of cage-borne balls 16.

Fig. 4 shows a fixed support rail 17 in place of an extensible rail 7, the rail 17 being suspended by way of a stay projection 18 in a recess 5 of the carrier member 3.

Figs. 5, 6 and 7 show particular forms of an abutment for limitation of the movement of a metal baking tray 14 relative to a movable rail member 15, the abutment being in the form of dovetail detents 16. These offer a particularly good protection against unintended overcoming of the abutment.

In the embodiment according to Fig. 8, vertical carrier members 23, which are arranged at the two side walls 21 in a baking oven muffle 22, are of round material and each fastened, together with withdrawable catalytic protective walls 24, by way of knurled screws 33 at the side walls 21. Locally fixed rail members 26 of telescopically extensible rails 27 together with the carrier members 23 form a unit of substantially stable shape. A rearward abutment 30 and a retarding abutment 31, which limit the displacement of a cooking stock carrier placed on movable rail members 29 of the rails 27, are arranged on the movable rail members 29.

1. A cooker comprising a baking oven muffle, a plurality of upright mounting members arranged at the side walls of the muffle and a plurality of extensible rails mounted on the mounting members and each comprising a fixed rail member and a movable rail member movably mounted thereon and adapted for sliding support of a tray or grill, the fixed and movable rail members of each rail being provided with co-operable extension-limiting means to limit relative movement of the rail members in the sense of extension of the rail and the movable rail member with further extension-limiting means to limit sliding movement of such tray or grill relative thereto.

2. A cooker as claimed in claim 1, wherein the mounting members are detachably fastened to the muffle side walls.

3. A cooker as claimed in either claim 1 or claim 2, comprising catalytic protective wall members removably arranged between the mounting members and the muffle side walls.

4. A cooker as claimed in any one of the preceding claims, wherein the rails comprise a respective plurality disposed at each side wall of the muffle and mounted on a respective plurality of the mounting members, the rails of each such plurality being suspended by suspension means from the associated mounting members and disposed at respectively different heights in the muffle.

5. A cooker as claimed in claim 4, wherein each of the mounting members is provided with a plurality of recesses disposed at respectively different heights in the muffle and the suspension means comprise hooks engaged in selectable ones of the recesses.

6. A cooker as claimed in any one of the preceding claims, wherein ends of the rails remote from the back of the muffle are provided with cam surfaces engageable by a door of the cooker to effect retraction of the rails on closing of the door.

7. A cooker as claimed in any one of the preceding claims, the further extension-limiting means comprising dovetail detent means.

8. A cooker substantially as hereinbefore described with reference to the accompanying drawings.

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ABSTRACT:

CHG DATE=19990617 STATUS=O> An oven comprises telescopically extensible rails (7) fastened to carrier members (3) arranged vertically at the side walls (1) of a baking oven muffle (2). Each rail (7) comprises a movable rail member (9) and a locally fixed rail member (6), which have co- operable extension-limiting devices. The movable rail member (9) also has an extension limitation (10) co- operating with a food tray or grill slidably carried by the movable rail member. 